

IN THE CLAIMS

1. (Currently Amended) An image reading apparatus comprising:

a white reference member;

an original document support member;

an image reading device selectively capable of imaging an original document placed on the original document support member and a reference surface of the white reference member, wherein the image read device generates white reference image data when the image reading device images the reference surface of the white reference member and generates original image data when the image reading device images an original document placed on the original document support member reading image data of the reference member;

a random noise suppressing device that suppresses random noise components in the white reference image data generated by the image reading device;

a storage device that stores a first image data obtained by reading said reference member with said image reading device at a plurality of positions in a sub-scanning direction while said image reading device moves, and stores a second image data obtained by averaging image data acquired by reading said reference member a plurality of times at a position in the sub-scanning direction by said image reading device; and

a detecting device that detects a location of one or more abnormalities in the white reference image data in which random noise components have been suppressed by the random noise suppressing device, wherein each abnormality corresponds with the presence of foreign matter on the reference surface of the white reference member; and the an abnormal position of said reference member at the position, at which the second image data is obtained, based on the first and second image data stored in said storage device.

an abnormality identification device that generates an abnormality signal indicative of the detected location of the abnormality.

2. - 18. (Cancelled)

19. (New) An image reading apparatus according to claim 1, wherein said random noise suppressing device suppresses random noise components by averaging the white reference image data read by the image reading device.

20. (New) An image reading apparatus according to claim 1, wherein said random noise suppressing device suppresses random noise components by carrying out an interpolation process on the white reference image data read by the image reading device.

21. (New) An image reading apparatus according to claim 20, wherein said random noise suppressing device comprises a delay device and an interpolation device.

22. (New) An image reading apparatus according to claim 1, further comprising a shading correction device that carries out a shading correction based on the white reference image data read out by the imaging device, and wherein said random noise suppressing device suppresses random noise components in the white reference image data on which the shading correction has been carried out by said shading correction device.

23. (New) An image reading apparatus according to claim 1, further comprising a shading correction device that carries out a shading correction based on the white reference image data having random noise components suppressed by said random noise suppressing device, and wherein said detection device detects abnormality on the white reference member based on the white reference image data on which the shading correction has been carried out by said shading correction device.

24. (New) An image reading apparatus according to claim 1, wherein said random noise suppressing device operates only when an abnormality is to be detected on the white reference member by said detection device.

25. (New) An image reading apparatus according to claim 1, wherein the image reading device images the reference surface prior to imaging an original document placed on the original document support member so that the detecting device can detect the location of the abnormalities prior to the imaging of the original document.

26. (New) An image reading apparatus comprising:

a white reference member;

an original document glass;

an image reading device selectively capable of imaging an original document placed on the original document glass and a reference surface of the white reference member, wherein the image read device generates white reference image data when the image reading device images the reference surface of the white reference member and generates original image data when the image reading device images an original document on the original document glass;

a random noise suppressing device that suppresses random noise components in the white reference image data;

a detecting device that detects a location of one or more abnormalities in the white reference image data in which random noise components have been suppressed by the random noise suppressing device, wherein each abnormality corresponds with the presence of foreign matter on the reference surface of the white reference member; and

an abnormality identification device that generates an abnormality signal indicative of the detected location of the abnormality.